

system boundaries. For these cases only the suppliers and suitable contacts have to be listed.

This system boundary has been chosen for several reasons:

- it allows the data user to connect the process data with background data in a consistent way,
- it does not force the data suppliers to have lca knowledge, to compile a lci, to purchase and use a (specific) lca software,
- it supports transparency and provides the opportunity to make data quality checks based on technical knowledge of the processes.

3 Document Structure and Access

All documents including a manual, a checklist and the data collection format as such can be downloaded from the VDA website [2]. The most comprehensive document is the manual for the VDA LCA Data Collection Format for Life Cycle Assessment (LCA). It mainly addresses a target audience with limited experience in the field of LCA or those users of the VDA LCA Data Collection Format that are interested in further background information or general methodological aspects. This manual is divided up into five sections:

Chapter 1: Background and Goals of the VDA LCA Data Collection Format

Chapter 2: VDA LCA Data Collection Format Spreadsheet

Chapter 3: VDA LCA Data Collection Format Manual

Chapter 4: Checklist for Filling in the VDA LCA Data Collection Format

Chapter 5: Example of Use

Chapter 1 (Background and Goals of the VDA LCA Data Collection Format) describes the motivation for a standardised VDA LCA Data Collection Format and its purpose. In chapter 2 (VDA LCA Data Collection Format Spreadsheet)

the contents and the form of the format are given. Chapter 3 (VDA LCA Data Collection Format Manual) offers general notes and assistance for handling the data collection format, whereas in chapter 4 the checklist for the VDA LCA Data Collection Format offers practical support for the user by leading him step by step through the format.

The example of use (chapter 5) illustrates how to fill in the format using the production of a front fender (side panel) without primer as exemplary case.

There are two further documents available for direct use of experienced practitioners. They are basically the 'Checklist' and 'VDA Data Collection Format Spreadsheet' chapters of the manual. As these two parts are actually used for the data collection, they can be downloaded as separate files for convenience reasons.

References

- [1] ISO 14040:1997 – Environmental Management – Life Cycle Assessment – Principles and Framework; ISO 14041:1998 – Environmental Management – Life Cycle Assessment – Goal and Scope Definition and Inventory Analysis; ISO 14042:2000 – Environmental Management – Life Cycle Assessment – Life Cycle Impact Assessment; ISO 14043:2000 – Environmental Management – Life Cycle Assessment – Life Cycle Interpretation
- [2] VDA Subcommittee Life Cycle Assessment (2003): German Association of the Automotive Industry (Verband der Automobilindustrie – VDA) – Data Collection Format for Life Cycle Assessment, Adopted Document from 07.08.2003 – Version 1.1, Current versions of the documents are available as download from the VDA homepage at: http://www.vda.de/en/vda/intern/organisation/abteilungen/umwelt_04.html

Book Presentations

A Theory of the Environment and Economic Systems

A Unified Framework for Ecological Economic Analysis and Decision Support*

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Contents: Preface Part I: Introduction 1. The Questions 2. The Scientific Context 3. Outlook Part II: Economic Systems 4. Introduction to Part Two 5. Economic Processes 6. On Solving the First Fundamental Equation 7. Towards Concrete Tools for Environmental Analysis and Decision-Support: Inventory Analysis Part III: The Environment 8. Introduction to Part Three 9. Environmental Processes 10. Environmental Impacts 11. The Environmental Problem 12. Towards Concrete Tools for Environmental Analysis and Decision-Support: Impact Analysis Part IV: Conclusion 13. The Answers 14. Further Reflections 15. Summary of Findings References Index

A number of tools for environmental analysis and decision support have been developed over time, including life-cycle assessment, substance-flow analysis, environmental impact and risk assessment. Many of these tools have different economic systems – a product, a regional

substance-flow, a factory or emission pattern, etc. – as their object. This book aims to reconcile and unify the many different tools for environmental analysis and decision-support into one meta-tool.

The subject of this study revolves around two problems: the attribution problem – which environmental problems are to be attributed to which economic activities; and the position problem – what is the relative position of a number of the various tools for environmental decision-support? Both these problems can be resolved by the construction of a general framework and specific methodological steps within the framework. The main focus of this study is on the methodology.

By providing a common framework for topics often treated in isolation this book enables experts from many fields, including scholars of environmental, resource and ecological economics, environmental science as well as researchers and professionals within industrial ecology, to understand the full depth and range of the material.

* Heijungs, R.: Economic Drama and the Environmental Stage. Formal derivation of algorithmic tools for environmental analysis and decision-support from a unified epistemological principle. Proefschrift. Leiden 1997 [see also Int J LCA 2 (4) 195–196 (1997)]